


**WATER  
TREATMENT NEWS**

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## Get Your System into the 21<sup>st</sup> Century

Building engineers who have been on the job for more years than they probably want to admit can remember the time when they managed the water treatment program for their steam boiler or cooling water system manually. They controlled blowdown or bleed-off by turning a valve, and chemical was often dumped in with a bucket. Needless to say, scale, corrosion and other water-related problems were common.

In the early 1970s, advances in electronics resulted in the introduction into the water treatment market of automatic bleed-off and blowdown controllers. These machines, though crude by today's standards, effected a quantum leap in the engineer's ability to accurately control boiler and cooling water dissolved solids levels. By continuously or intermittently sensing the system water electrical conductivity, the controller adjusted blowdown or bleed-off based on system load, resulting in more consistent dissolved solids levels and improved scale and corrosion protection.

Today's controllers provide Greater accuracy than their predecessors, and they can do much more than just control

dissolved solids levels. The new machines can monitor and control pH and oxidation/reduction potential (ORP), which determines the level of oxidizing biocides in cooling water. They can also track and totalize make-up and bleed-off flow rates, monitor chemical inventory levels, and, with new metering technology, can even measure the amount of chemical being added to the system. The controllers also help manage overall system operation by monitoring a range of other functions such as temperatures and pressures.

In the past, operating engineers were required to monitor readings and make adjustments and recalibrations directly on the controller. Now, the controllers can communicate with a PC at a remote location using modem or Ethernet connections. This capability enables the engineer to monitor system readings *and* adjust control and alarm set-points, chemical feed rates and other critical functions from his office. Software onboard the controller compiles this data and prepares reports in tabular and graphic form showing operational trends that give the engineer pinpoint control over his system.

Optional networking protocols like Modbus or LonWorks® enable controllers to be incorporated into many building management systems (BMS). To do this, the controller and BMS languages must be compatible. Engineers who are interested in this capability should check to see if the protocol used by their BMS is available as an option on water treatment controllers he is considering for purchase.

A number of controls companies offer boiler and cooling system controllers, most of which are purchased through water treatment chemical companies as part of an overall water treatment program. One water treatment chemical firm, Lakeville, Minnesota based International Chemtex Corporation, has introduced a control package called the IC Cooling Water Control Panel that includes a cooling water controller, an integrated sample flow assembly with flow switch and three chemical injection pumps, all mounted on a

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*This Newsletter courtesy of:*

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<p>polypropylene panel. The controller features the full range of monitoring and control capabilities and is available with either Modbus or LonWorks® communications packages.</p>	<p>According to Lynn Shaw, Chemtex Technical Director, this gives the IC Panel the ability to interface with more building management systems than any other water treatment</p>	<p>control system on the market. In fact, says Shaw, the system is the only one available that can communicate with Trane Tracer™, a widely used BMS.</p>
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**The Chemtex IC Cooling Water Control Panel is the only control system that allows for direct control of a boiler or cooling water system through the building management system.**

<p>Shaw points out that by incorporating the IC Cooling Water Control Panel into the BMS,</p>	<p>the facilities engineer can now monitor and control all the facility's mechanical systems from his office, saving time and</p>	<p>providing for more efficient and reliable mechanical system performance.</p>
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**Is your water treatment controller outdated?  
 Ask your Chemtex representative  
 About the IC Control System today!**